5. The Irish Hillfort

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Abstract

Hillforts represent the largest and arguably most impressive archaeological monuments in the Irish landscape. While the study of hillforts progressed rapidly in Britain during the twentieth century, it was not until the work of Barry Raftery in the late 1960s and 70s that these great enclosures became the focus of sustained research in Ireland. Raftery's excavations at Rathgall in Co. Wicklow became the cornerstone of Irish hillfort studies, and began to reveal a different history of design and use from that recorded in Britain. Whereas hillforts in Britain and the Continent are more generally associated with Iron Age societies, their Irish counterparts have close connections with warrior societies of the later Bronze Age. As in Britain, recent research has highlighted the phenomenon of Neolithic hillforts in Ireland, and the possibility that some sites of the early medieval period should be considered in this way. This chapter discusses the developing narrative of hillfort studies in Ireland, and considers how the Irish examples compare with their British counterparts as recorded in the Hillfort Atlas.

Keywords: hillfort; prehistoric Ireland; late Bronze Age

Introduction

Hillforts are the largest prehistoric monuments in the Irish landscape. Their imposing nature points to the significance they held in economic, political and other terms for complex societies of the Bronze Age in particular. Excavation confirms these were centres of high-status residence, specialist crafts and trade, used for military purposes and assembly, as well as for ritual and ceremony. Their prominent siting was strategic, connected not only to control of routeways but part of a highly visible display of political and military power in the landscape. As with their British counterparts, the scale and logistics of hillfort construction in Ireland are impressive, with extensive clearance of land and the building in many cases of several kilometres of artificial defences enclosing areas of up to 10 ha and more. This involved the coordinated effort of a large group working under strong leadership to an agreed design and a clear vision of what was intended. The recognition of distinct types of hillfort in Ireland confirms their construction conformed to certain design concepts. There is also morphological variability that can be attributed to different understandings of the significance of hilltop enclosures during the Neolithic and Bronze Age, and in later periods. As in other parts of Europe, the use and wider significance of hillforts is much debated in Ireland, with opinion often divided between those who regard these sites as defensive strongholds, and those who argue for wider meaning in social and economic terms. These viewpoints need not be in opposition, as there is enough evidence to indicate that hillforts served many different roles in their respective communities. This paper will review that evidence to discuss the monumentality of the Irish hillfort in its landscape setting.

The early years of hillfort research in Ireland were strongly influenced by the definitions and interpretations developed by an earlier tradition of research in Britain. One of the earliest researchers in Ireland, Barry Raftery, considered hillforts as "hilltop enclosure[s] of considerable size and strength, which deliberately exploit the natural properties of the situation for *defensive* purposes" (Raftery 1994: 38). Grogan (2005b: 111) defined Irish hillforts as "large hilltop sites that take advantage of the natural *defensive* properties of the topography". Today, the use of the term 'hillfort' is viewed as an oversimplification, but is nonetheless widely used by archaeologists (Harding 2004).

These militaristic connotations have been challenged in recent years (Brown 2009: 7; Harding 2012: 1), with more nuanced approaches highlighting the multi-functional nature of these sites (see Armit 2007; Lock 2011; Driver 2013; O'Driscoll 2017; 2018). Considering this new standpoint, Harding (2012: 1–5) concluded that the term 'hillfort' is problematic and views it more as a term of convenience. He instead suggests that the act of 'enclosure' is a key element, both physically and conceptually demarcating an area to which access is restricted or controlled.

Terminology is further complicated by regional chronologies. In Britain, the term 'hillfort' has long been synonymous with the Iron Age, despite evidence for the construction of these sites during the late Bronze Age (Mytum 2013: 5). Hillforts in Britain were occupied over two millennia from 1000 BC–AD 1000 (Harding 2012: 151), with a major construction horizon around the sixth and fifth centuries BC (Cunliffe 2013: 304). In central Europe, hillforts were constructed as far

back as 1800 BC (see Primas 2002). In Ireland, hillforts with securely dated enclosing elements indicate a later Bronze Age construction horizon, beginning at the transition from the middle to late Bronze Age (*c.* 1400 BC) and continuing until the latter part of the late Bronze Age (*c.* 800 BC).

These broad and subjective definitions, regional chronologies, as well as the ever-developing narrative regarding function, have led to differing interpretations of terminology, limiting international comparisons and studies. This paper will give a broad overview of the Irish evidence, with the aim of providing a platform for future research.

Irish hillforts: a brief history of research

The study of hillforts in Ireland began with Thomas Westropp's surveys in the early 20th century. His most important work, *The Ancient Forts of Ireland*, was the first significant attempt to classify monument types labelled as 'fort', though he did not specifically categorise hillforts as a separate monument type (Westropp 1902). Even before the invention of absolute dating techniques, Westropp posited that the majority of so-called ringforts were early medieval, and that larger hilltop and cliff forts such as Mooghaun, Co. Clare [0801][1] and Dún Aonghasa, Co. Galway [0733], were built as early as 1200 BC. Westropp was the first to criticize the mythological origins of these forts, widely accepted by antiquarians such as John O'Donovan and George Petrie who considered Dún Aonghasa to be the last stronghold of the mythical Fir Bolg, one of the ancient peoples of Ireland (O'Donovan 1839; Petrie 1872). Westropp saw these large forts as part of a series of monuments stretching throughout Europe (Ashe FitzGerald 2000, 56), recognizing the ritual and ceremonial significance of these centres (Westropp 1911: 347).

While some surveys were conducted at Irish hillforts in the early modern era (e.g. Orpen (1911; 1916), there was a notable lack of excavation work. The first scientific excavation was undertaken by Bersu at Freestone Hill, Co. Kilkenny [0678] in the late 1940s and subsequently published by Raftery (1969). This was quickly followed by excavations at Downpatrick [0810] in Co. Down (Proudfoot 1954; 1955). At Freestone Hill, high status Roman material recovered from a central enclosure prompted Raftery to argue that the site was Iron Age, though later he conceded that the distinctive late Bronze Age pottery associated with the enclosing elements could date the fort to this period. This excavation and his subsequent investigation at Rathgall hillfort [0723] in Co. Wicklow became the foundation for the first major synthesis of Irish hillforts (Raftery 1970a; 1970b; 1972).

At Rathgall, Raftery identified extensive evidence for specialist craftworking as well as evidence for exotic items indicative of long-distance trade. Mallory (1995) identified similar evidence for the latter at Haughey's Fort, Co. Armagh [0662]. A recent re-evaluation of this site by Mallory and Baban (2014: 26) suggests that its occupants were also producing prestige goods. A large central post structure was partially excavated, its use possibly connected to the ritual character of the fort (see below). Importantly, secure radiocarbon and dendrochronological samples acquired from the enclosing elements date the defences of this hillfort to the late Bronze Age. Environmental analysis was also undertaken revealing that the construction of Haughey's Fort coincided with an intensive land clearance and agricultural activity.

Subsequently, a number of important investigations by the *Discovery Programme* were undertaken at Mooghaun, Co. Clare (Grogan 2005a; 2005b) and Dún Aonghasa, Co. Galway (Cotter 2012a; 2012b). These supported the late Bronze Age dates obtained from Haughey's Fort and paralleled the environmental evidence, revealing extensive clearance of the hilltops prior to the construction of the enclosing elements. Other significant investigations include the extensive excavation of Rahally, Co. Galway [0737], in advance of road development and the research excavations at Knockdhu, Co. Antrim [0806].

Despite this research, hillfort studies in Ireland have not advanced significantly, due in part to a lack of secure dating information and to problems of classification. Until recently there were only ten or so hillforts excavated in Ireland, with only a few examples investigated or dated in a comprehensive manner. This has resulted in a poor understanding of the function and economy of these monuments and only a tentative chronology. The lack of site information has pushed Irish researchers to rely heavily on interpretations from British and continental studies, which has its limitations given the often insular character of Irish hillforts. A recent integrated study of Irish hillforts and their social context, which included excavation and dating of an additional ten sites (O'Brien and O'Driscoll 2017) has provided a stronger chronological framework and theoretical basis from which to study these sites.

Hillforts as field monuments: classification and morphology

Raftery (1972: 39) proposed the first classification of Irish hillforts, dividing forty known examples into three groups. Class 1 hillforts comprise univallate sites such as Clonmantagh, Co. Kilkenny [0676]. Class 2 sites

[1] Where individual sites are named, if in the Atlas the Atlas reference number is given.

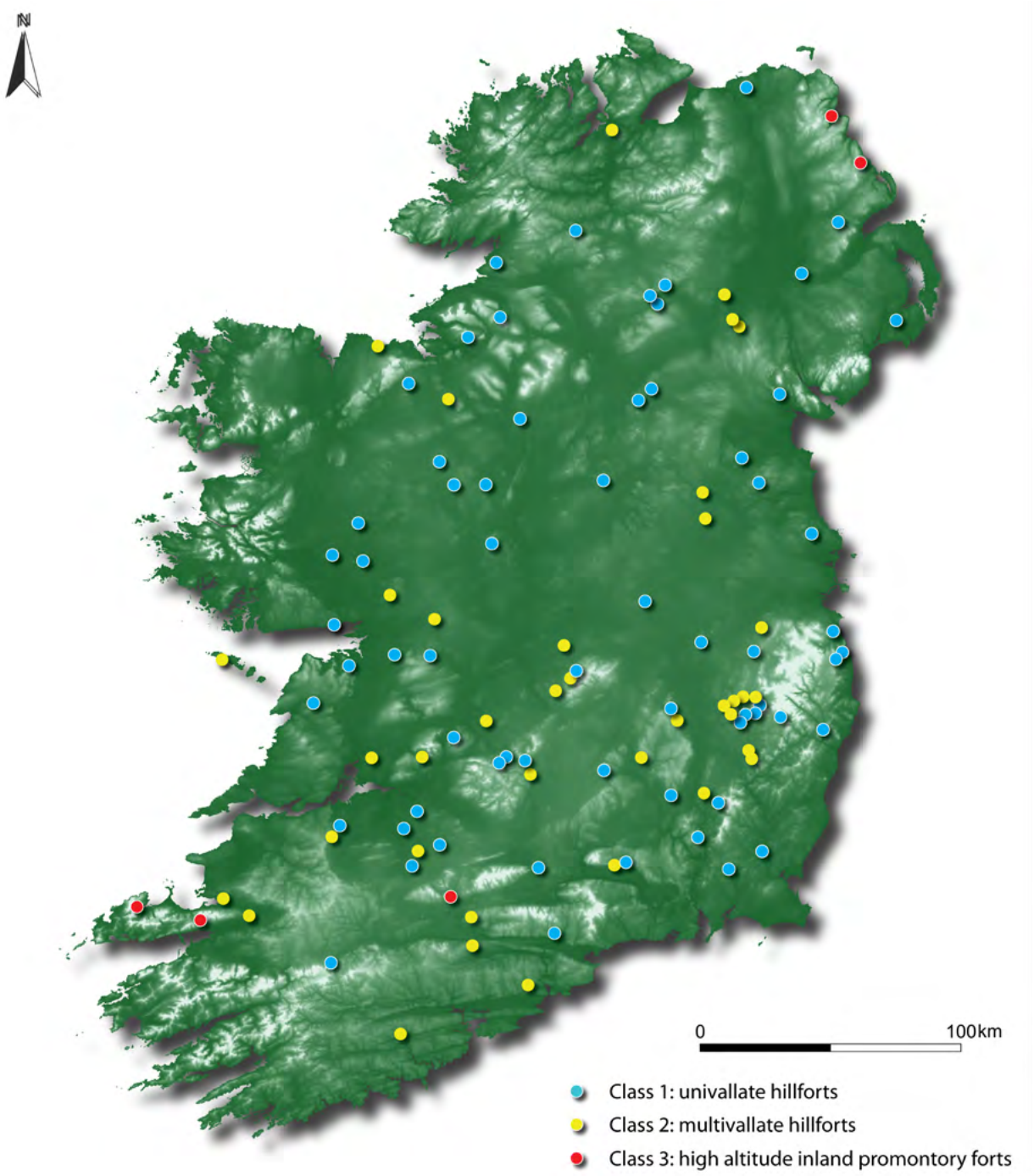


Figure 5.1 Distribution map of Irish hillforts of Classes 1, 2 and 3 (copyright authors).

are defined as widely-spaced, multivallate defences on (a) hilltops, including Toor More, Co. Kilkenny [0677], and (b) cliff-tops such as Dún Aonghasa, Co. Galway. Class 3 include high-altitude inland promontory forts such as Knockdhu, Co. Antrim and Caherconree, Co. Kerry [0664]. Coastal promontory forts are excluded from this classification as are various other types of hilltop enclosures. Since Raftery's (1972) publication, the number of identified hillforts in Ireland has risen significantly to include 108 possible examples (see Grogan 2005b; O'Brien and O'Driscoll 2017), Figure 5.1.

An estimated 55% of Irish hillforts are univallate (Class 1), Figure 5.2, 40% widely-spaced multivallate (Class 2a), Figure 5.3, with the remainder high-altitude inland promontory forts (Class 3), Figure 5.4. There is no archaeological distinction between Class 1 and 2 hillforts other than the number of enclosing elements.

Figure 5.2 Clomantagh, Co. Kilkenny, an example of a Class 1 hillfort (Google Earth 2018).

Figure 5.3 Toor More, Co. Kilkenny, an example of a Class 2a hillfort (Google Earth 2018).

Figure 5.4 Caherconree, Co. Kerry, an example of a Class 3 hillfort (copyright authors).

Both types are sited in similar topographical positions and elevation. Class 1 hillforts are sited on average at 167 m OD and Class 2 are 178 m OD. Only three hillforts are positioned above 410 m OD. Claragh, Co. Cork is at 446 m OD [0668]. The hillforts of Faha [0669] and Caherconree in the Slieve Mish Mountains, Co. Kerry, however, are situated much higher, at a height of 777 m and 659 m OD respectively.

Grogan (2005b: 121) concluded that elevation on its own was not a significant factor in hillfort location and suggests that extensive views over specific parts of the local landscape were more important. It is certainly the case that most Irish hillforts have commanding views. An estimated 69% of Class 1 hillforts have panoramic views (360°), with a further 20% having extensive (approximately 270°) visibility of the surrounding landscape (O'Brien and O'Driscoll 2017). Class 2 hillforts generally have more extensive viewsheds, approximately 80% having panoramic views and 15% have extensive visibility. Irrespective of classification, many Irish hillforts tend to be located at the interface between upland and lower terrain, such as Glanbane, Co. Kerry [0670] or Clashanimud, Co. Cork [0666], with very few in what could be described as lowland settings.

More notable differences occur when analysing the area enclosed, with Class 2 sites (7.82 ha on average in size) enclosing twice that of Class 1 examples (3.64 ha on average in size). Approximately half of all univallate sites are under 2 ha, with 20% over 5 ha. In comparison, 16% of widely-spaced multivallate sites are under 2 ha and 20% are over 10 ha. Some examples can be much larger, with the multivallate fort of Tinoran, Co. Wicklow [0728], being an estimated 84 ha, and the univallate contour fort of Spinans Hill 2, Co. Wicklow [0727], enclosing an area of approximately 131 ha.

The different types of hillfort in Ireland do not have mutually exclusive distributions. All three of Raftery's classes occur widely throughout Ireland with gaps in their distribution occurring in agriculturally rich areas and extensive lowland. The recently discovered Rahally hillfort, Co. Galway is an excellent example. Situated at the summit of a low-rise hill, the large widely-spaced multivallate hillfort has been completely levelled and was only discovered prior to construction of the N6 Galway to East Ballinsloe road scheme (Mullins 2008).

Further classification of class 2(a) hillforts is possible. An estimated 55% of this class could be categorized as having widely spaced enclosing elements, the separation always being over 55 m; Kill Hill hillfort,

Figure 5.5 Cairn at the highest point of the interior of Carn Tighernagh, Co. Cork (copyright authors).

Co. Kildare [0674] is an excellent example. About 30% have more closely spaced enclosing features, separated by no more than 30 m (on average 20 m), as seen at Rathgall, Co. Wicklow and Haughey's Fort, Co. Armagh. The remaining Class 2a hillforts have closely spaced multivallation with no significant space between the enclosing elements, such as Ballinkillin, Co. Carlow [0679]. Raftery (1994: 57–58) has suggested that sites with little or no space between the enclosing elements provided defence in depth, whereas those that are widely spaced offered space to regroup and fall back on inner ramparts. Wailes (1982) suggests that the outer enclosures of a hillfort may have been a 'token' element of ritual or symbolic significance, while most would regard multivallation as a statement of power and status. It is also possible that the outer enclosures functioned as practical boundaries for corralling cattle, or the organisation of settlement space.

Approximately 25% of Irish hillforts have recorded cairns or mounds within them, with three examples enclosing megalithic tombs, while 34% of sites surround some other form of prehistoric burial monument (i.e. a barrow, mound, cairn etc.), Figure 5.5. The incorporation of earlier burial monuments may be a symbolic attempt to both venerate the past and legitimate power and control of the landscape. The significance placed on these monuments by the hillfort builders is implied by the number of examples that survive. This is attested at Freestone Hill, where it is suggested that the hillfort builders avoided an earlier Bronze Age cairn that was subsequently destroyed by Iron Age occupants of the hillfort (Raftery 1969: 7).

Thirty-one hillforts have surface evidence for settlement activity, such as hut circles, most of which have no independent dating. Only nine hillforts have more than ten visible structures within their interiors. In some instances, the absence of obvious evidence for settlement might also be explained by seasonal, rather than permanent occupation and/or activity. The inaccessibility of certain hillforts did not restrict their use for extensive settlement. For example, 22 hut structures are visible at Caherconree, an inland promontory fort positioned at 659 m OD on a western facing spur of Gortaleen Mountain in the heart of the Slieve Mish mountain range overlooking Tralee Bay and Dingle Bay, Co. Kerry. Conversely, easily accessible hillforts such as Rahally, Co. Galway reveal very limited settlement activity. This is despite over 50% of the interior of Rahally (Mullins 2008) being excavated. It must also be noted that not all settlements were enclosed during the late Bronze Age, as evidenced by the extensive settlement at Corrstown, Co. Derry (Ginn and Rathbone 2011).

Problems with hillfort classification

The Raftery (1970a; 1972) hillfort classification continues to be widely used in Ireland, despite taxonomic limitations in respect of some other categories of enclosure. However, it is difficult to improve considering the limited number of recognised 'hillforts' in Ireland. Instead, it is the rigid terminology and definitions that need to be critically examined, as these limit the inclusion of site types such as the hilltop enclosures or coastal promontory forts. Although there is some validity for the exclusion of such sites, it is important to highlight the reasons for this in order to make international comparisons more accessible. Ralston (2006) has suggested that there may be up to 30,000 hillforts in Europe. This contrasts starkly with the limited number of identified hillforts in Ireland. However, this may be a consequence of the rigid definition implemented in Ireland. For example, the term tends to be more loosely applied in Britain. More than half of the total number of British hillforts enclose an area under 1.2 ha (Harding 2012: 9) and Halliday and Ralston (2009: 467) noted that the majority of the 1305 hillforts in Scotland then known are 'tiny enclosures'. Cunliffe (1991: 312) has proposed that these small enclosures may legitimately be considered as a separate phenomenon, as is the case in Ireland.

Irish hillforts are often distinguished by their size. The most common definition places them over 1 ha in internal area, with smaller examples classified as 'hilltop enclosures' (Grogan 2005b: 116–117). In Ireland, coastal and low-lying inland promontory forts are a distinct monument type attributed to their own cultural and chronological horizons. This contrasts with Britain, where these sites are viewed as a sub-set of the 'hillfort' class. In Britain, for example, the term 'hilltop enclosure' is used to describe a fort usually larger than 15 ha that dates to the end of the late Bronze Age or early Iron Age (Cunliffe 2013: 300), although Manby (2007: 401) has used the term to describe much smaller sites, such as Grimthorpe [1802] and Thwing [3002] in Yorkshire, England, that date to a similar period.

There are 140 registered 'hilltop enclosures' in the Irish national inventory of archaeological sites, although Grogan (2005b) has listed some 200 examples. A review of these recorded sites highlights that only 73 examples correspond with this definition (O'Brien and O'Driscoll 2017). Conventionally, these sites are regarded as being contemporary with the Irish hillfort thus dating to the late Bronze Age, the only morphological differences being their size (see Grogan 2005a: 247). Excavation of the hilltop enclosure at Clenagh, Co. Clare [3059] did not produce any construction dates or artefacts that could date the site (Grogan 2005a: 253). At present, there is no clear evidence which suggests hilltop enclosures and hillforts are chronologically or culturally linked, or that the former is a distinct class of monument.

Further complicating the matter is the prevalence of the early medieval ringfort (Stout 1997). These small circular enclosures, usually under 0.2 ha in size, are often found on hillslopes and are generally interpreted as dispersed rural settlements for subsistence farmers. They are the most common archaeological site type from the early medieval period, *c.* AD 400–1200, with an estimated 60,000 examples believed to have been once present in Ireland. Over 300 examples have been excavated and recent developer-led excavations (O'Sullivan *et al.* 2014) emphasize the continued use of these monuments throughout the early medieval period, with little evidence of earlier origins. The large excavation record confirms that ringforts are not chronologically or culturally associated with hillforts, though there can be later associations, such as the stone-built examples inside the hillforts at Mooghaun, Co. Clare and Rathgall, Co. Wicklow.

In most cases, it is impossible to separate hilltop enclosures and ringforts on morphological grounds. One of the defining characteristics of hilltop enclosures, and the only way to distinguish them from ringforts, is their topographical prominence. To contextualise this, the landscape setting of a sample of 1801 ringforts in eastern Ireland was examined. There are only eight prominently sited examples that could be more appropriately categorised as 'hilltop enclosures'. While this is an insignificant proportion with regards to the overall number of ringforts, if we extrapolate the number of possible hilltop enclosures wrongly included in this class of monuments, it would none the less substantially increase the number of recognised sites, adding over 250 examples. Considering the poor chronology of the hilltop enclosures and the lack of established chronological or cultural links with standard hillforts, a review of this class of monuments is needed before we can consider them more fully in the context of Irish hillfort studies.

The large provincial royal enclosures of Tara, Co. Meath, Dún Ailinne, Co. Kildare, Rathcroghan, Co. Roscommon, and Navan Fort, Co. Armagh, have also be considered as hillforts. However, three of these have been dated to the middle Iron Age (Johnston and Wailes 2007; Wailes 1990: 20; Roche 1999; Mallory 2000). The morphological layout of these enclosures is also somewhat distinct. Tara, Dún Ailinne and Navan Fort have substantial internal ditches, a design feature that Warner (2000) has interpreted as a defence against the chaotic otherworld emanating from the interior. The distinct morphological differences and later date range may suggest that these 'royal' centres cannot be considered as hillforts proper. 'Hillforts' with substantial internal ditches, such as Kedrah, Co. Tipperary [0711] where they have been recently discovered by geophysical survey, may therefore be more appropriately categorised with these Iron Age royal sites.

Figure 5.6 The coastal promontory fort of Dunbrattin, Co. Waterford (Google Earth 2018).

In Ireland, coastal promontory forts are a distinct monument type in cultural and chronological terms (Figure 5.6). They are mainly found along the west, south and north coasts and generally occur on narrow necks of naturally formed coastal headlands, with the landward side closed-off by a combination of artificial enclosing elements. The enclosed area varies from 0.01–32 ha, though many have been reduced in size by coastal erosion. A small number are so large that they include smaller defended headlands within, such as at Dunbrattin, Co. Waterford [0963/0976], and Ballyoughteragh South, Co. Kerry [1259]. In most cases there is a notable lack of visible settlement evidence within the interior. Rectangular structures, reminiscent of medieval buildings are sometimes recorded, such as at Lissamona/Lios Ó Móine (Clear Island), Co. Cork [0856]. Early medieval souterrains are also recorded in examples such as at the larger coastal promontory at Termoncarragh, Co. Mayo [1703].

The *Archaeological Survey of Ireland* records 345 coastal promontory forts, many being included on the basis of placename evidence. Placenames such as '*dun*' or '*doon*' are apparent at many recorded sites (Redmond 1995: 51). Some headlands bearing these names cannot be interpreted as promontory forts, primarily due to the absence of any surface evidence for enclosing elements. A review undertaken for *The Atlas* suggests the true number of this monument type is closer to 280. Unfortunately, few examples have been excavated, and

the evidence in relation to dating and cultural affinities remains inconclusive. Coastal promontory forts remain one of the least understood and under-researched monument types in Ireland.

Distribution and landscape setting

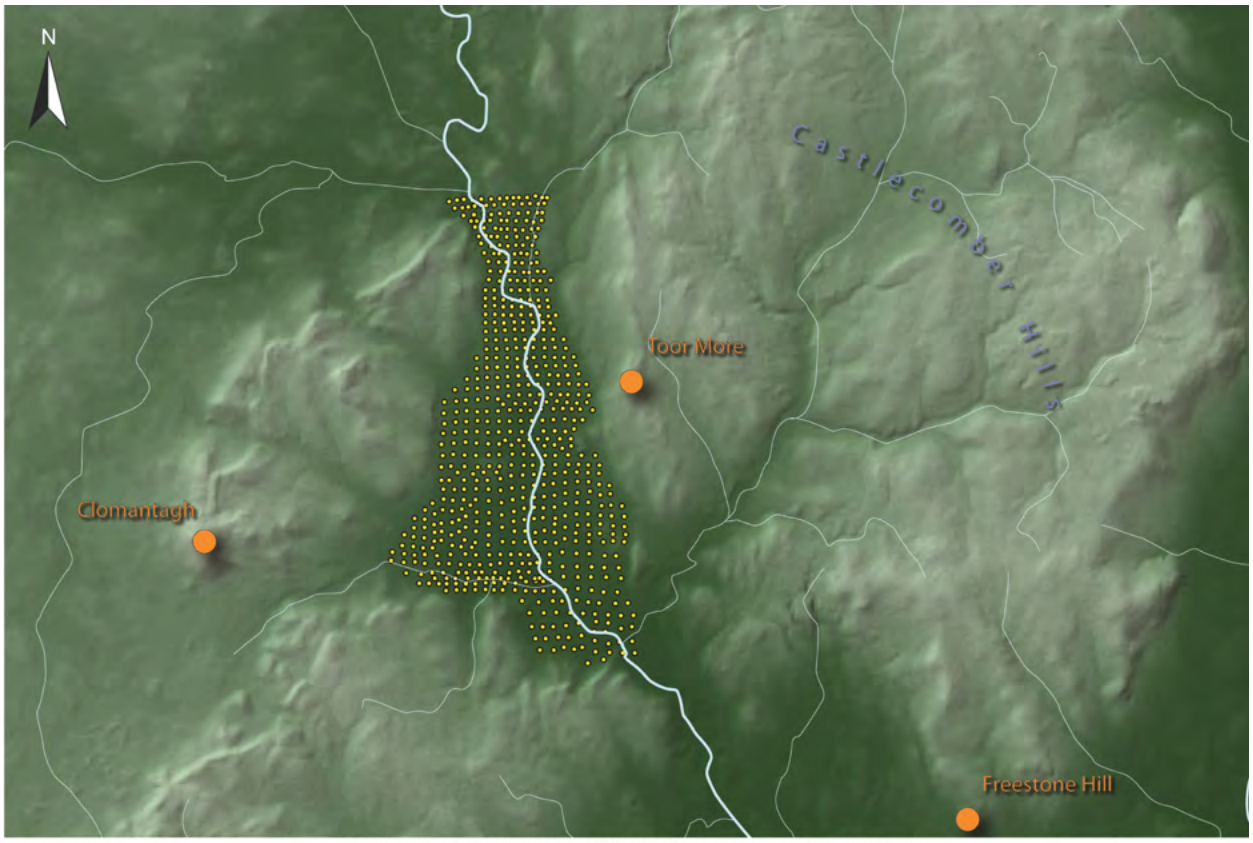
The Irish definition of hillforts distinctly refers to monuments on or near hilltops, cliff edges and spurs and generally does not include enclosures in other topographic settings. Most Irish hillforts occur in isolation, which may reflect an element of territoriality at a regional level. Grogan argues such territories were expansive, ranging from 225 sq. km to 325 sq. km, with each sub-divided into smaller territorial zones of up to 21 sq. km (Grogan 2005a: 87–99; Grogan 2014: 63). Natural features defined these boundaries, with contemporary burial monuments often found in close vicinity. Attempts in the 1970s to statistically define hillfort territories in Britain using Thiessen Polygons (Cunliffe 1971; Clarke 1972; Collis 1977) supported the link between territorial limits and natural features such as rivers and upland zones (see Cunliffe 1971: fig. 14). Other authors have attempted to define hillfort territories with varying success (Collens 1988; Driver 2013; Cunliffe 2000; Harding, A. 2000: 303). The most notable result from these investigations is the disparate size ranges of territories in individual studies, reflecting the subjective nature of this research. A more refined way of accessing the potential size of hillfort territories is through GIS techniques such as Path-Distance Catchment Analysis which uses anisotropic movement to map the potential area that can be reached within a set time (Herzog 2014). These analyses have been undertaken for some hillforts in Co. Wicklow (O'Driscoll 2016) where the territories of these sites ranged from 300 sq. km to 640 sq. km.

While it may be more accurate to describe these large 'territories' as areas over which the hillfort communities exerted their influence, there is some evidence that each monument may have had a distinct and visible core boundary. In the Baltinglass landscape of County Wicklow, a series of hillforts are positioned on adjacent hills, sub-divided by deeply cut river-valleys. These naturally liminal valleys may have been used to define the limits of the inner territorial boundaries of each individual fort. Further augmenting these natural barriers is a distribution of ring-barrows, clustering in low-lying areas, either at the base of hills with hillforts or adjacent to streams and rivers (O'Driscoll 2016: 324). These monuments to the dead could have been placed near territorial boundaries to both physically and ritually demarcate a community's tribal ground.

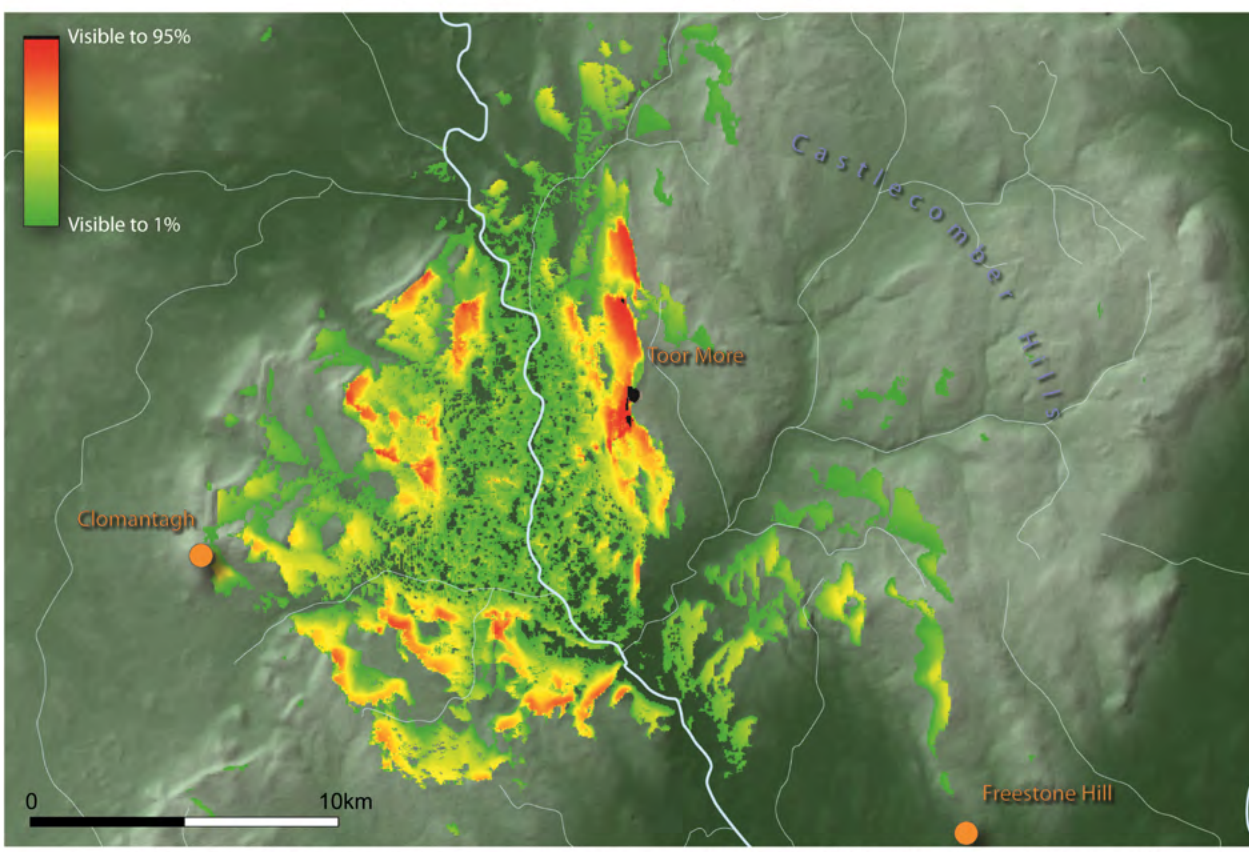
At Haughey's Fort, Co. Armagh, Conway (2006: 37) has proposed that the late Bronze Age linear earthworks 400 m to the south-east of the site functioned as a territorial division and formed a key component of the Haughey's Fort landscape. He argues that linear earthworks often have a marked relationship with ring-barrows and may have formed part of a territorial system with a less formal mode of definition. The earthworks essentially formed part of a boundary defining the core area dominated by Haughey's Fort (Conway (2006: 38), which could have measured approximately 1.3 km east–west by 1.6 km north–south (2.08 sq. km).

Centralized societies such as those associated with hillforts are often associated with intensification of farming (Renfrew and Bahn 2006: 215). This is attested in the pollen record at many sites in Ireland, where there is an intense tree clearance episode and an increase in agricultural indicators contemporary with the construction and occupation of the hillfort (O'Brien and O'Driscoll 2017; O'Driscoll 2017). This may have been to acquire surplus stock for trade or to accommodate full-time craft specialists. The consistent clearance episodes recorded at these hillforts not only had the benefit of creating land for agricultural use, but also served to increase visibility of the hillfort. With the addition of monumental enclosing elements, and the very deliberate placement of these sites in highly visible locations that often overlook natural routeways, hillforts would have acted as 'beacons in the landscape' (Brown 2009). This allowed the occupants to exert control by monitoring movement through the landscape, and as such, restricting access to different resources.

This corresponds well with the argument that one of the main contributory factors to the location of a hillfort is its visibility in the local landscape and/or proximity to natural routeways (O'Driscoll 2017). This suggests that some hillforts were located in the most visible positions in the landscape in order to control territories and routeways through visibility and by extension this indicates the occupant's ability to trade high status goods. At Toor More in Co. Kilkenny [0677], cumulative viewshed analysis was used to reveal that the hillfort was located in one of the most prominent locations as seen from the valley floor, being visible to over 630 randomly generated viewer points (O'Driscoll 2017), Figure 5.7. Ballylin hillfort in Co. Limerick [0680] is located at the northern end of an extensive escarpment; it was built on one of the most prominent locations as seen from the eastern lowland. It is one of only two areas here that is visible to over 1570 randomly generated viewer points from this landscape. This high visibility from the vicinity implies considerable planning when deciding where to position a hillfort. The distinctive siting of these monuments may have been based on a need to control territory and routeways through visibility (see Murray this volume). This was particularly important, where hillfort (or Bronze Age) elites created and maintained positions



Valley floor with 631 random viewer points generated



Cumulative viewshed results. Note one of only two areas visible to over 95% of the viewpoints is Toor More

Figure 5.7 Cumulative viewshed analysis of Toor More hillfort, Co. Kilkenny (copyright authors).

of social dominance by controlling the population and supply of prestige goods and metal (O'Brien 2015: 290; Kristiansen 1999; Kristiansen and Larsson 2005). The need to command these routeways, and to be seen from them, may have been a significant factor in choosing these locations.

While hillforts mostly occur in isolation, there are a number of pairs, such as the Friarstown group in Co. Limerick [0682/0683], and Rathgall and Knockeen [0722] hillforts in Co. Wicklow. An exceptional group of up to nine hillforts is located on the western edge of the Wicklow Mountains, overlooking the town of Baltinglass (O'Driscoll 2016). Ongoing research there has revealed that not all of these sites are contemporary, with the sites of Hughstown [0673], Rathcoran [0724] and Spinans Hill 1 [0726], dating to the early Neolithic. The sites of Rathnagree [0725] and Sruhaun [0729] are broadly contemporary, dating to the middle/late Bronze Age, while Tinoran hillfort [0728] dates to the late Bronze Age.

Hillfort chronology in Ireland

The classification of Irish hillforts is complicated by a long history of hilltop enclosure across the island, which includes sites of different age and purpose with similar surface features in the modern landscape. While advances have been made in relation to Class 2 (multiple enclosure) examples, the chronology of Class 1 (univallate hillforts), Class 3 (inland promontory forts) and coastal promontory forts has yet to be resolved (O'Brien 2017). Issues include the multi-period construction and prolonged occupation of many sites. Another problem is that without excavation it can be difficult to distinguish small examples under 1 ha, often referred to as 'hilltop enclosures', from medieval ringforts in similar landscape settings.

The dating of Irish hillforts was initially influenced by research in Britain where sites such as Maiden Castle [3598] are classic monuments of the Iron Age. This was generally accepted by Irish archaeologists, with some uncertainty created by earlier dates at a number of sites (Evans 1953; O'Kelly 1956; Proudfoot 1954). An Iron Age association was supported by the dating of a Class 1 hillfort on Freestone Hill, Co. Kilkenny, to the fourth century AD, considered '...a product of an indigenous Celtic group having close contacts with the Roman world, but continuing a tradition of hillfort building, which had been going on unbroken in Ireland for some considerable period beforehand' (Raftery 1969: 102). This was the uncertain background of hillfort chronology when in 1969 Barry Raftery began his important investigation at Rathgall, Co. Wicklow. The results from this significant site, and from twenty or so other excavations in the intervening period, established the Bronze Age as the main period of hillfort building in Ireland.

The building of large enclosures on hills and mountains began in Ireland in the early fourth millennium BC. Examples include Donegore, Co. Antrim (Mallory *et al.* 2011), Thornhill, Co. Derry (Logue 2003), and Knocknarea, Co. Sligo (Bergh 2002), among others. The great variability in location and design points to several traditions of enclosure during the earlier Neolithic (Sheridan 2001; Cooney 2002). Some sites have been compared to the causewayed enclosures of southern Britain, including Donegore and a more recent discovery at Magheraboy, Co. Sligo (Danaher 2007). Single and multiple enclosures of early Neolithic date have recently been identified at Hughstown, Co. Kildare and Spinans Hill 1, Co. Wicklow (O'Brien and O'Driscoll 2017), and at Faughan Hill, Co. Meath (Dowling *pers. comm.*). While these sites had varied use, defence was certainly a consideration in their location and design, with effective barriers created by combinations of ditches, banks, stone walls and timber palisades.

The game changer in respect of hillfort studies in Ireland was Rathgall, where excavation uncovered a high-status occupation with specialised metalworking and funerary ritual of the middle to late Bronze Age, *c.* 1400–1000 BC (Raftery 1976a; 1976b; Becker 2010). This was followed by large-scale excavations at Haughey's Fort, Co. Armagh (Mallory and Baban 2014); Mooghaun, Co. Clare (Grogan 2005a; 2005b); Dún Aonghasa, Co. Galway (Cotter 2012a; 2012b), Rahally, Co. Galway (Mullins 2008), and recently at the Hill of Ward, Co. Meath (Steve Davis *pers. comm.*). These excavations highlight the difficulty of obtaining secure dates for the construction and abandonment of hillfort defences, with many radiocarbon results relating to episodes of occupation. This was addressed by a recent investigation of Class 2 hillforts in southern Ireland, which obtained dating samples from defensive palisades at Clashanimud, Co. Cork; Rathnagree, Co. Wicklow, and Toor More, Co. Kilkenny, and from other primary contexts at Ballylin, Co. Limerick; Formoyle or Foymoyle Beg [0800], Co. Clare; Glanbane, Co. Kerry, and Tinoran, Co. Wicklow (O'Brien and O'Driscoll 2017).

Taken together, these results establish the Bishopsland phase of the middle Bronze Age (*c.*1400–1150 BC), equivalent to the Taunton (1400–1275 BC) and Penard phases (1275–1140 BC) in southern Britain, as an important period in the emergence of the Bronze Age hillforts in Ireland. The building of these multiple enclosure hillforts intensified in the early part of the Roscommon phase (1150–1000 BC), which marks the beginning of the late Bronze Age in Ireland and is equivalent to the Wilburton (1140–1020 BC) phase of metalworking in Britain. There is evidence for continued construction of Class 2 hillforts in the tenth and ninth centuries BC, during the transition from the Roscommon to the Dowris phase of the late Bronze Age. Some inland promontory forts (Class 3) date from that period, with occupation during

the tenth and ninth centuries BC at Knockdhu, Co. Antrim, (Macdonald 2016). It is also possible that some univallate (Class 1) hillforts were built at that time, with examples at Freestone Hill, Co. Kilkenny (Raftery 1969; Ó Floinn 2000); Downpatrick (Cathedral Hill), Co. Down (Proudfoot 1954; 1955; Raftery 1976a) and Clogher, Co. Tyrone [0813] (Warner 2009) recording finds of Bronze Age pottery.

The occupation of Class 2 hillforts declined significantly in Ireland around the eighth century BC, with no examples built during the Iron Age (600 BC – AD 400). Reference can be made here to large hilltop enclosures at 'royal sites' of the developed Iron Age, such as Ráth na Rí, Tara, Co. Meath (Roche 2002), Dún Ailinne, Co. Kildare (Johnston and Wailes 2007), and Navan Fort, Co. Armagh (Lynn 2003). These internally ditched enclosures are generally regarded as ceremonial locations, but had elements of fortification that could place them at the end of the hillfort spectrum (Harding 2012: 284). Iron Age occupation is also recorded at some Bronze Age hillforts, notably Rathgall (Becker 2010), Dún Aonghasa (Cotter 2012a; 2012b), and Haughey's Fort (Mallory and Baban 2014). There is also evidence of re-occupation of older hillforts during the early medieval period, which included the building of ringfort-type enclosures inside some examples (e.g. Mooghaun, Rahally and Rathgall). The large stone ringforts of that period, sites such as Cahercommaun and Ballykinvarga in Co. Clare, the central enclosures of the Grianán of Aileach, Co. Donegal [0803], and Staigue Fort, Co. Kerry, might be considered by some to be small hillforts in terms of their defensive features and socio-political significance, though it is clear that they were built at a much later period. It is also likely that many coastal promontory forts in Ireland are medieval (see O'Kelly 1952; Barry 1981), with no confirmed examples of prehistoric date.

In conclusion, it is now apparent there was more than one hillfort tradition in prehistoric Ireland, and there is no chronological basis to Raftery's (1972) classification of these sites. Recent research confirms that sites with similar enclosing features can date to either the early Neolithic or the middle to late Bronze Age. The first hilltop fortifications were of univallate and multiple enclosure design, built by farming communities of the early Neolithic, *c.* 3700 –3500 BC, with defensive and other considerations in mind. Similar types of large enclosure were developed two thousand years later during the Bishopsland phase of the middle Bronze Age *c.* 1400–1150 BC, and in increasing numbers during the ensuing Roscommon Phase (1150–1000 BC) of the late Bronze Age. A smaller number of hillforts were built and occupied during the Dowris phase of the late Bronze Age, with their use declining sharply after 800 BC for reasons connected to an apparent collapse of that highly complex Bronze Age society. What constitutes a hillfort after that is partly a matter of definition, with internally ditched 'royal enclosures' of the Iron Age and large stone forts of the early Medieval period having certain elements in common with their Bronze Age predecessors. That said, the absence of classic hillforts and coastal promontory forts continues to distinguish the Iron Age in Ireland from many other parts of Atlantic Europe.

Hillfort function in Ireland

While the excavation evidence is often equivocal, it does seem that hillforts in Ireland had many different functions, as often suggested for British examples (Armit 2007; Brown 2009; Harding 2012, 27; James 2007; Lock 2011). One of the most common interpretations is that hillforts were used as practical defensive enclosures, with the size and extent of the enclosing features often cited as evidence for this. At Rathnagree, Co. Wicklow, for example, the Phase 1 enclosures comprised widely spaced concentric palisades with a composite length of 1.7 km (O'Brien and O'Driscoll 2017). An estimated 3,400 posts were needed for their construction. At Toor More, Co. Kilkenny, upon excavation, two widely spaced low-relief earthworks were each revealed to comprise an internal palisade, a bank and a rock-cut ditch. The composite length of the defences is 1.53 km (O'Brien and O'Driscoll 2017). At Clashanimud, Co. Cork, two widely separated enclosing elements over a perimeter of nearly 2 km, each consisting of a bank with wooden fence/palisade and rock-cut external ditch, provided a substantial barrier to outsiders (O'Brien and O'Driscoll 2017). Interestingly, the 'defences' of all three of these hillforts were comprehensively destroyed by fire.

In contrast with the impressive nature of these enclosing elements, excavations at some hillforts such as Ballylin in Co. Limerick (O'Brien and O'Driscoll 2017) have revealed the earthworks to be genuinely slight. Ballylin consists of two roughly concentric, widely spaced enclosing elements occupying a total area of over 21 ha. Excavation revealed that both enclosures comprised a shallow ditch with a low bank on either side. While the use of either enclosure as a functional barrier is questionable, the length of these works, the inner enclosing elements being 1.01 km long and the outer example 1.65 km, is unequivocally monumental. Instead, it may have been intended that Ballylin was viewed from a distance, the extensive enclosing elements acting as a signal of the power and strength of the community that built them.

The apparent practical function of a hillfort does not necessarily negate a ritual element. Lock (2011: 355) views hillforts as 'structures that mediated a peaceful and harmonious life within small scale agricultural communities', arguing that 'community building' offers a better explanation than a purely defensive rational

(Lock 2011: 359). Scarre (2011: 17) aptly describes this as 'an act of social construction'. Sharples (2007; 2010: 123) develops this theory, proposing that hillforts were the focus of community building and that the ramparts acted as a mechanism for competitive display, a viewpoint more fully adopted by Driver (2013) in his study of the hillforts in north Ceredigion, Wales. Monumental display may explain the large defences of some hillforts, the size and composition of the enclosing elements acting as a physical imposition of power (Driver 2013; 109).

The size of the enclosing elements at Rathgall, Co. Wicklow, suggests a need for the ramparts to be visible in the local landscape. Here, the rather unimpressive location of the hillfort is substantially augmented by large banks. In Ireland, however, the few examples of excessive enclosure architecture, such as Dún Aonghasa, contrast with the unimpressive nature of many hillfort ramparts. While this may be more of a reflection on the survival rates of monuments (Toor More for example), it is also a feature of late Bronze Age hillforts in southern Britain (Hamilton and Manley 2001). During that period, the topographical and strategic setting was important and hillforts helped to monumentalize prominent topographic landmarks and heighten the appearance of artificiality, putting the hilltop at odds with the natural environment (Driver 2013: 91; Hamilton and Manley 2001: 29).

In most cases, where large-scale excavation of a hillfort has occurred, evidence for trade and exchange is readily apparent. At Dún Aonghasa, for example, nine complete and four incomplete amber beads, two probable bead fragments, and an object tentatively identified as a stud and a non-diagnostic scrap were recovered (Feeney-Johnson 2012: 94). Amber provides one of the clearest indicators of long-distance trade in prehistoric Ireland as it is not found naturally on the island (O'Brien 2012: 227). Three amber beads and several fragments were recovered from Rathgall. Of further interest was the recovery of 88 complete and fragmentary glass beads. Some of these have a specific composition comprising low magnesium (MgO) and high potassium oxide (K^2O) levels (LMHK) (Henderson 1988), allowing them to be linked to the glass production site of Frattesina in northern Italy (Brill 1992; Henderson 1988). Other LMHK glass beads recovered from the hillfort at Freestone Hill, Co. Kilkenny, and in the Lough Gur landscape of Co. Limerick, may also have come from Northern Italy.

Excavations at Haughey's Fort recovered a bronze pin possibly from northern Europe (Mallory 1991: 21; Warner 2006: 24; Mallory and Baban 2014: 26; Brandherm 2014). Approximately 700 m south-west of Haughey's Fort, a hoard in the townland of Tamlaght comprises a sword and two bronze bowls that were probably imported from central Europe (Warner 2006; 2013: 38). An Iberian-style gold neck-ring found 600 m east of Haughey's Fort probably dates to the middle/late Bronze Age transition (Warner 2013). A portion of a similar Iberian style neck ring was found in a hoard recovered within the interior of Downpatrick hillfort [0810] in Co. Down. Panels of engraved herringbone design on this neck ring are comparable to Iberian neck rings of Berzocana type (Almagro-Gorbea 1995: 140; Eogan 1994; Waddell 1998: 198–199), indicating potential links with western Iberia before 1000 BC. A bar toggle found at Rathgall and comparable to numerous examples found in southern Denmark and northern Germany attests to links with these areas (Raftery 1975; Waddell 1998: 270). The variety of finds indicates the hillfort had trading links with various regions of Continental Europe.

Elite elements of ranked societies played a central part in the exchange networks recorded from the middle and late Bronze Age. Their political power and status was seemingly linked with their ability to control the distribution of exotic goods (Waddell 1995: 162; Sharples 2007: 112). To control this trade, elites may have constructed hilltop settlements in strategically significant positions in the landscape. The role of hillforts in controlling high status goods is further attested by the manufacturing of such objects at Irish hillforts. At Dún Aonghasa, 460 moulds and crucible fragments were found (O'Carroll 2012: 28), while at Rathgall several thousand clay mould fragments were recovered (Raftery 1976a: 345). These were used to manufacture a diverse range of prestige goods and weapons. Mallory (1995: 80–81) has posited that the small traces of gold found in pits within Haughey's Fort may have been fragments of industrial waste.

There is also clear evidence for ritual activity at some Irish hillforts, the most notable being the creation of the man-made ritual pool known as the King's Stables near Haughey's Fort (Lynn 1977: 43). Radiocarbon dating suggests that this was built around the same time as Haughey's Fort (Lynn 1977: 48–54; Mallory 1995: 84; Weir and Conway 1988: 28; Mallory and Baban 2014). A 3 m wide entrance flanked on either side by a palisade in the middle enclosing element of Haughey's Fort is aligned towards the King's Stables (Mallory 1995: 84; Conway 2006). On that basis, Mallory (1995: 84) suggests that the community that constructed the hillfort is also likely to have established the King's Stables. Approximately 18 fragments of clay moulds for leaf-shaped bronze swords were recovered from the King's Stables, as well as a portion of a human skull.

Structural evidence from Haughey's Fort offers further indications of contemporary ritual activity. A large 25–30 m wooden structure comprising an arc of three lines of stakes set outside larger posts is dated 1250–900 BC (Mallory 1995: 75; Mallory and Baban 2014).

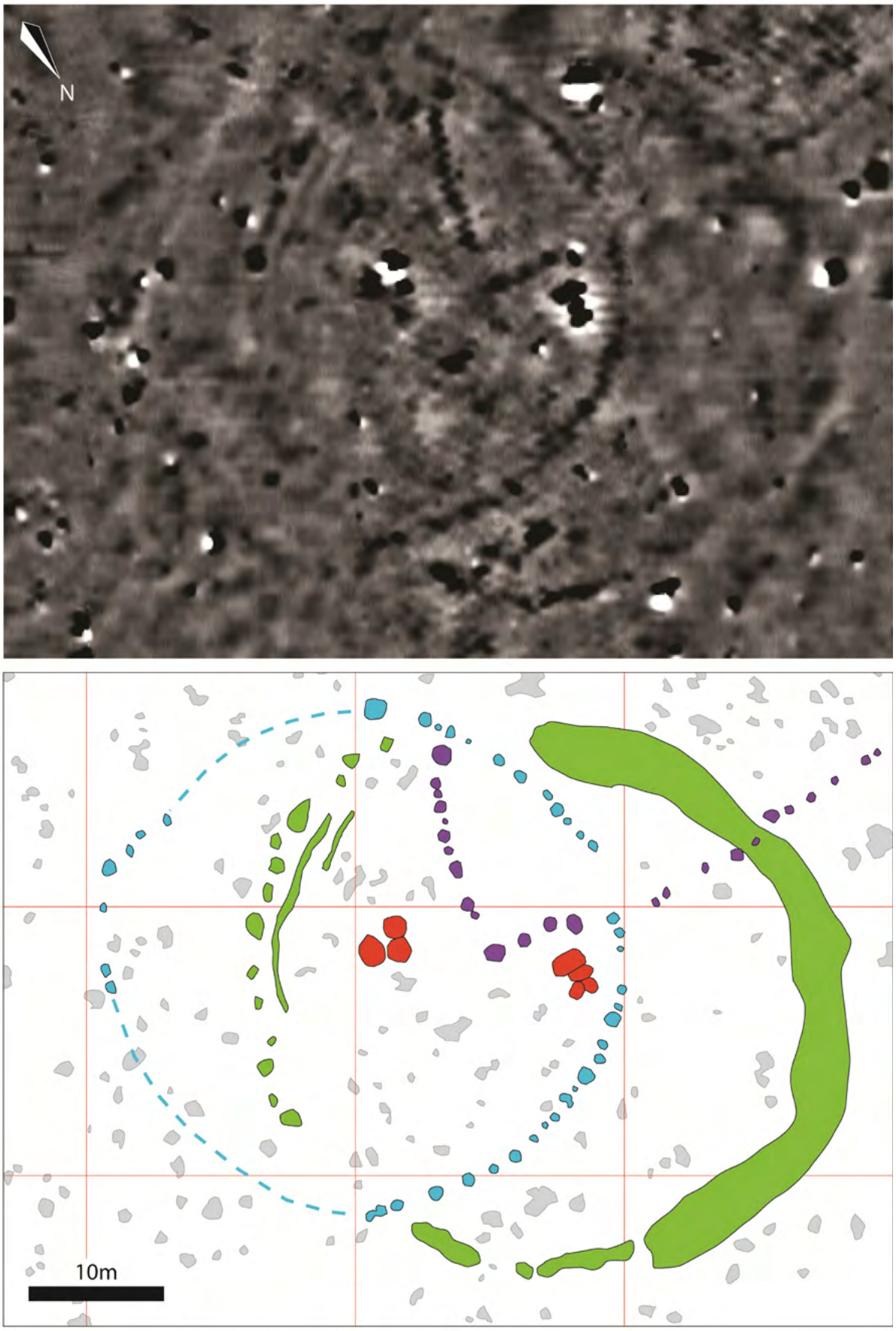


Figure 5.8 Geophysical survey (with interpretation) of Glanbane hillfort, Co. Kerry, showing the remains of two overlapping enclosures at the centre of the interior (copyright authors).

Within this structure a series of substantial pits was identified containing carbonized grain, coarse ware pottery, fragments of quern stones, metal artefacts and fragments of bronze and gold (Mallory 1995: 78; Mallory and Warner 1988). The only comparable evidence was recently identified through geophysical survey of Glanbane, Co. Kerry, where a large wooden structure 45 m in diameter truncates a larger (55 m in diameter) enclosure at the centre of the hillfort (O'Brien and O'Driscoll 2017), Figure 5.8.

Evidence for feasting identified at Dún Aonghasa and Haughey's Fort may also have a ritual significance. At Haughey's Fort, an 18 m section of the inner ditch produced approximately 3000 animal bones (Mallory and Baban 2014: 25–26; McClatchie 2014). Mallory and Baban (2014: 25–26) argue that unless there was an efficient method of preservation, the only sensible way to disperse of such large quantities of meat was through communal feasting. McClatchie's (2014) study of the plant remains from the site suggests that the hillfort acted as a central place for dispersed, small-scale communities who gathered together at the site for communal activities, such as feasting and storing food products. McCormick and Murphy (2012: 157–158, 166) have noted the presence of pig bone at Dún Aonghasa, even though the lack of tree cover on the island would not have been amenable to these animals, implying that this meat was imported from the mainland. Again, this evidence could support the idea that disparate groups congregated at the hillfort, bringing food stocks possibly for communal feasting.

Evidence for hillforts in Ireland and on the Continent suggest that they provided a range of specialist economic and defensive functions that restricted access to high-status objects and centralized control over both agricultural and craft production (Brück and Fokkens 2013: 95). This corresponds with the argument that a hillfort functioned as a 'central place', acting as a focal point in a redistribution network (Cunliffe 1995: 93).

Hillfort conservation in Ireland

Given their size it is not surprising that many Irish hillforts have been damaged or destroyed in the modern era. Some examples are in lowland areas of good agricultural potential, while others have an exposed position in upland terrain with poor soils. The impact of farming varies accordingly, with some sites totally or partially cleared for farm pasture (e.g. Glanbane, Co. Kerry, Formoyle, Co. Clare and Sruhaun, Co Wicklow), while others are grazed with less interference. Hillforts are vulnerable to other developments, the most serious being high-density planting of conifers in what is regarded as marginal land. Of 108 confirmed or likely hillforts listed in a recent survey (O'Brien and O'Driscoll 2017), approximately 20% have been impacted in a serious manner by State-subsidised forestry. There are many other examples where forestry extends to the perimeter of the hillfort. In the worst cases planting, preceded by clearance and deep ploughing, extended across all or most of the hillfort interior. This has taken place at the Class 1 hillforts of Coolagad [0719], Downshill [0720] and Kilranlagh [0730] in Co. Wicklow, and Knockadigeen, Co. Tipperary [0713]; and at the Class 2 hillforts of Ballincurra [0708] and Curraghadobbin [0709] in Co. Tipperary, Cumber Lower, Ballymacmurragh, [0695] Co. Offaly, Mooghaun, Co. Clare, and Tinoran, Co. Wicklow (Figure 5.9). This occurred despite prior knowledge of these hillforts, with many examples of harvesting and re-planting forest at those same locations.

Their landscape setting means that hillforts are not often impacted by large infrastructure projects such as roads and pipelines, with one recent example being Rahally, Co. Galway. Smaller developments are recorded at many sites, including the building of telecommunication masts, reservoirs and housing, quarrying, and the creation of walking paths, memorials, graveyards and additional entrances. With their exposed location some hillforts can be damaged by natural erosion, particularly those in limestone terrain, while other forms of bioturbation include animal burrows and uncontrolled growth of gorse and hazel scrub. Not surprising given the nature of the Irish coastline there is significant erosion at many coastal promontory forts, a recent publicized example being Dunbeg, Co. Kerry [1283].

All known hillforts, hilltop enclosures and coastal promontory forts in the Republic of Ireland and Northern Ireland are listed in the respective Sites and Monuments Records. This affords a considerable degree of protection, with a requirement that landowners notify relevant State authorities in advance of any physical interference with these sites. Planning controls, preservation orders and a general prohibition of metal detecting offer further protection. While these controls have saved hillforts from developments such as wind farms, there are recent examples where forestry, agricultural clearance and telecommunication masts have caused damage at these sites. Protection on the ground continues to be an issue, particularly in the case of developments such as forestry that are actively supported by the State. The protection of hillforts in Ireland would be enhanced by greater public awareness of their historical importance and heritage tourism potential. A small number have been acquired by the State for public presentation as National Monuments, notably Dun Aonghasa, Co. Galway, Mooghaun Co. Clare, and Rathgall, Co. Wicklow. While their size and ownership tend to discourage local authorities from such initiatives, public access to hillforts has an important amenity value for walking trails and as nature reserves.

Figure 5.9 Tinoran hillfort, Co. Wicklow, showing the extensive forestry that has heavily damaged the site (Google Earth 2018).

The future of Irish hillfort research

The emerging narrative of Irish hillforts is one that has many common features, but also significant differences, with Britain. The recent dating programme at Irish sites has reinforced the middle/late Bronze Age construction horizon and further highlighted the complete absence of Iron Age examples. The Irish record corresponds well with studies in mainland Europe, where researchers recognise an intensive period of hillfort building around the middle/late Bronze Age (Primas 2002). Similarly, there is an increase in the deliberate construction of hillforts in strategic locations overlooking natural routeways at this time, probably to monitor and control trade and exchange. Jockenhövel (1975: 57), for example, has noted that German hillforts of the Urnfield period were located along important long-distance routes.

Other comparisons include the often unsophisticated layout of enclosing elements with simple entrance features (Jockenhövel 2013: 741; Härke 1979: 30, 166–167). Interestingly, there is a notable increase in the evidence for violence and traces of destruction are not uncommon (Thorpe 2013: 240). Harding (Harding, A. 2001: 334) and Bogucki (2004: 88–89) both suggest that "almost all" of the Urnfield hillforts in central Europe were rapidly destroyed, with artefact assemblages often indicating a single phase of occupation that rarely exceeded one hundred years, evidence that is readily comparable to the Irish sites of Clashanimud, Co. Cork, Rathnagree, Co. Wicklow and Toor More, Co. Kilkenny.

At many European sites that have had more extensive investigations of their interiors, there is evidence for metalworking and specialized craftworking, similar to that found at some Irish sites. Lull and collaborators

(2013: 612) highlighted that all excavated hilltop sites in Portugal have produced evidence for metalworking, while Härke (1979: 30) has suggested that similar evidence is often found on German hillforts during this period. Jiráň and others (2013: 792) noted that crafts, especially metalworking, were also concentrated at hillforts in the later Bronze Age in Austria. Vandkilde (2004: 32) suggests that all of these central European sites should be interpreted as centres of crafts and trade protected by local elites. Although craftworking was not confined to these locations, there is a clear concentration of such activities at hillforts in late Bronze Age Europe. Similarly, intensive craftworking at Dún Aonghasa, Rathgall, and to a lesser extent, Haughey's Fort, implies a similar centralisation of high status goods production in many hillforts.

While it is now possible to make more meaningful comparisons between Irish and European hillforts, there remains a common set of problems that inhibit this work. The most obvious are issues regarding classification and terminology, problems that had to be addressed in the Atlas. A comparison with hillforts in other parts of Europe is not easy; for example, in Spain and Portugal, where these sites are often referred to in different ways, such as *castros*, *citanias*, *cividades* or *cidás*, and have a much wider temporal currency, ranging from the early/middle Bronze Age to the early medieval period (Pardo *et al.* 2009). The subjectivity surrounding definition and terminology relates to the fact that the physical, functional and temporal variability of hillforts means they will always defy rigid classification. The process of enclosure can have multiple connotations and purposes at different times and places (Brown 2009: 7; Harding, D. 2004: 298; Halliday and Ralston 2009: 467), meaning that a 'hillfort' built in the late Bronze Age might be constructed for very different reasons than one built in the later Iron Age, even if the two are be morphologically comparable with a similar landscape setting.

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